

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A detector device comprising at least a field-distorter, responsive to an input signal, for influencing at least one characteristic of a first electro-magnetic signal; and a mixer for combining at least the influenced first electro-magnetic signal and a second signal to produce a combined signal having a characteristic determined by the input signal.
2. (Original) A detector device as claimed in claim 1, in which the field-distorter is operable to change the phase of the first electro-magnetic signal.
3. (Previously Presented) A detector device as claimed in claim 1, in which the field-distorter comprises a semi-conductor device disposed adjacent to a first conductor for carrying the first electro-magnetic signal.
4. (Previously Presented) A detector device as claimed in claim 3, in which the semi-conductor device, preferably, a diode.
5. (Previously Presented) A detector device as claimed in claim 1, further comprising a signal generator for generating the input signal.
6. (Previously Presented) A detector device as claimed in claim 1, further comprising a transceiver for transmitting and receiving electro-magnetic signals.

7. (Previously Presented) A detector device as claimed in claim 6, wherein the transceiver comprises at least one of a transmit antenna and a receive antenna for transmitting an electro-magnetic signal and receiving a received signal respectively; the received signal being derived from the transmitted electro-magnetic signal.

8. (Original) A detector device as claimed in claim 7, in which the first electro-magnetic signal is derived from the received signal.

9. (Original) A detector device as claimed in claim 7, in which the first electro-magnetic signal is derived from the transmitted signal.

10. (Previously Presented) A detector device as claimed in claim 7, in which the second signal is derived from the received signal.

11. (Previously Presented) A detector device as claimed in claim 7, in which the second signal is derived from an oscillator for generating the transmit signal.

12. (Previously Presented) A detector device as claimed in claim 1, further comprising a signal analyser for monitoring the characteristic of the combined signal to determine the correct operation or otherwise of at least one element of the detector device.

13. (Original) A detector device as claimed in claim 12, in which the at least one element is at least one of a mixer, transmitter, oscillator and receive portion.

14. (Currently Amended) A detector device as claimed in claim 1 ~~in which~~ wherein the field-distorter ~~[[does]]~~ is configured to not radiate an electro-magnetic field in response to the input signal.

15. (Previously Presented) A detector device as claimed in claim 1, in which the field-distortor is arranged to radiate an electro-magnetic field in response to the input signal.

16. (Previously Presented) A detector device as claimed in claim 1, in which the field-distortor is spaced apart from the conductor without any physical connection therebetween.

17. (Previously Presented) A detector device of claim 2, in which the field-distortor comprises a semi-conductor device disposed adjacent to a first conductor for carrying the first electro-magnetic signal.

18. (Previously Presented) A motion detection system comprising a detector device comprising at least a field-distortor, responsive to an input signal, for influencing at least one characteristic of a first electro-magnetic signal; and a mixer for combining at least the influenced first electro-magnetic signal and a second signal to produce a combined signal having a characteristic determined by the input signal.

19. (Previously Presented) A method of operating a detector device comprising at least one circuit element and a conductor bearing a first electro-magnetic signal; the circuit element being disposed adjacent to the conductor; the method comprising:  
applying a signal to the circuit element to vary the electrical or electromagnetic characteristics of the circuit element and thereby influence at least one characteristic of the first electro-magnetic signal; and

producing an output signal indicative of the degree of influence exerted on the first electro-magnetic signal.

20. (Previously Presented) A method as claimed in claim 19, in which the detector device comprising at least a field-distortor, responsive to an input signal, for influencing at least one characteristic of a first electro-magnetic signal; and a mixer for combining at least the

influenced first electro-magnetic signal and a second signal to produce a combined signal having a characteristic determined by the input signal motion detection device.

22. (Original) A detector device as claimed in claim 2, in which the field-distortor comprises a semi-conductor device disposed adjacent to a first conductor for carrying the first electro-magnetic signal.